

**Venture North Sea Gas Limited.  
Whitbeck Exploration Well  
Environmental Statement Summary**

**To:** Sarah Pritchard

**From:** Sarah Dacre

**Date:** 18 February 2009

<b>ES Title:</b>	Whitbeck Exploration Well
<b>Operator:</b>	Venture North Sea Gas Limited
<b>Consultants:</b>	Rudall Blanchard Associates
<b>Field Group (DECC):</b>	London
<b>ES Report No:</b>	W/4033/2009
<b>ES Date:</b>	December 2008
<b>Block Nos:</b>	110/3b
<b>Development Type:</b>	Single exploration well

### **Project Description**

The project comprises:

- The drilling of a single dry gas exploration well to a depth of 1,646m below the seabed using the ENSCO 92 jack-up drilling rig;
- The well being drilled using Water Based Mud (WBM), which will be discharged at surface;
- A Drill Stem Test (DST) will be undertaken if hydrocarbons are detected;
- The drilling period is estimated to be 32 days (39 days if DST is undertaken).

### **Environmental Sensitivities**

The EIA identified the following environmental sensitivities:

- Moderate shipping activity (c.26 vessels per day passing within 10nm);
- High fishing activity;
- Fish spawning area for cod (peak in February and March), whiting, sole (peak in April), sprat (peak in May and June), plaice (peak in January and February) and *Nephrops* (peak in April-June). There are currently no restrictions on drilling or seismic activity in this block during the drilling period proposed.
- Nursery area for whiting, sole, plaice and *Nephrops*.
- Seabird vulnerability is high in August-January and March-May.
- Low numbers of cetaceans have been recorded;
- Annex I Habitats: Site surveys did not identify any potential Annex I habitats within the vicinity of the proposed project.
- Annex I Species: red-throated diver occurs within the vicinity of the proposed operations.
- Annex II Species: harbour porpoise and bottlenose dolphin occurs in low numbers, mainly in the summer months;
- Protected sites: The proposed operations are approximately 4km west from the boundary of the proposed Liverpool Bay Special Protection Area. The area qualifies for designation under the EC Birds Directive as it supports an internationally important population of common scoter and is an area regularly used by the red-throated diver, an Annex I

species.

### Key Potential Environmental Impacts

The following potential impacts and mitigation were addressed in the EIA:

- Obstacles to other marine activities during operations – the primary obstacles will be the presence of the rig and associated support vessels during mobilisation, drilling and demobilisation. A collision risk management plan will be in place to minimise the risk of vessel collision. In addition, safety zones will also be designated and the operations will be promulgated in advance through the Notices to mariners, Navtex and VHF broadcast.
- Seabed disturbance – As a result of drilling activities there will be a temporary disturbance to the seabed through:

(i) *Physical presence of the rig* - The placement of the spud cans of the jack-up rig on the seabed will disturb localised areas of seabed. Each spud can impact area will be approximately 154m<sup>2</sup>, therefore the total impact area of the 3 spud cans is estimated to be 464m<sup>2</sup>. This represents around 0.00003% of the total area of the proposed pSPA

(ii) *Mud and cuttings discharge* - Drilling operations at the Whitbeck well will include the use and discharge of WBM mud and cuttings to the sea-surface and at the seabed. Due to the slim-hole design, a worse case scenario of 109 and 429 tonnes of mud and cuttings will be discharged at the seabed and at the sea surface respectively, totalling 538 tonnes.

Proteus Modelling indicates that cuttings deposition will be between 0.01mm and 0.09mm in thickness. However, the majority of the depositional area will be in a layer 0.06mm thick. Studies have shown that impacts from smothering can occur where the depth of cuttings is 1mm or more (Bakke *et al.*, 1986). As the thickness of cuttings is unlikely to exceed more than 0.09mm at any location within the depositional area, smothering effects on flora and fauna are not expected. The worse case total depositional area down to a thickness of 0.01mm extends approximately 10km to the east and 6km to the west of the drilling location. The cuttings are estimated to encroach the pSAC boundary by a maximum of 5km (more likely 2km). Based on a pSAC area of 1400km<sup>2</sup>, this equates to 1.07% of the overall pSAC. There is unlikely to be any noticeable smothering or impacts on the benthic fauna and flora. In addition, due to the shallow waters and sandy nature of the sediment re-suspension and re-distribution of cuttings will take place and recovery of the area will occur soon after drilling ceases.

- Noise – the drilling operations and the presence of standby vessels and helicopter traffic will produce noise for approximately 32 days. Given that noise modelling suggests that the propagation of the drilling noise will reach background noise levels within 1km of the source and the short duration of operations, it is unlikely that marine mammals or seabirds will be disturbed or displaced from the area beyond a radius of 1km. In addition, the drilling period is out with a period of high seabird density and Venture plan to minimise traffic of vessels to the rig and as far as practical, to hold vessels in deeper water to the south-west of the rig, where populations of common scoter are minimal. In addition, helicopter traffic will be routed to approach the rig from the south to minimise traffic over areas of high populations of common scoter.
- Atmospheric emissions – the main sources of atmospheric emissions during drilling operations will be the result of diesel burnt for power generation of the drilling rig and associated stand-by vessels. Well testing may also be carried out. Given travel times of vessels, the number of vessels required and drilling time being optimised emissions will be negligible. In addition, all equipment and generators will be well maintained to ensure

optimum efficiency. In the event a well test is carried out, high combustion efficiency burners will be used and volumes flared will be kept to a minimum, not exceeding 96 hours.

- Marine discharges – the only foreseeable discharges are associated with the proposed drilling of the Whitbeck exploration well. The drilling operation will only use Water Based Muds. All chemicals are CEFAS registered and are not considered to be significantly harmful to the environment.
- Accidental events – A number of control measures will be in place to minimise the risk of accidental events such as an Oil Pollution Emergency Plan (OPEP) and an Emergency Response Plan (ERP). In addition, an environmental briefing pack will also be prepared for contractors to ensure awareness of environmental risks associated with the proposed operations.
- Cumulative Impacts – There are a number of proposed operations being considered within the vicinity of the Whitbeck well, however it is unlikely that operations will be conducted simultaneously and therefore the Whitbeck Appraisal well is unlikely to have a significant effect in combination with other projects

**Public Consultation:** No comments were received as a result of the public consultation.

**Consultee(s):**

The statutory consultees for this project were Natural England (NE)/JNCC and CEFAS. The following comments were made:

NE/JNCC: it was advised that an Appropriate Assessment screening exercise be undertaken as there is the potential for significant impact on the conservation objectives of the pSPA. However, after consideration of further cuttings modeling, this advice was withdrawn. Recommendation for approval was given.

CEFAS: There are no fisheries related restrictions covering this Block during the proposed works period. Recommendation for consent was issued.

**Further Information:** In addition to the consultee comments a number of issues were highlighted by DECC and further information was requested.

Venture North Sea Gas Limited provided the additional information requested and where appropriate acknowledged comments and committed to incorporating them in future submissions. All issues were considered satisfactorily amended and clarified.

**Conclusion(s):**

Following consultation and the provision of the additional information on the 9<sup>th</sup> February, DECC and its consultees are satisfied that this project is not likely to have a significant impact on the receiving environment, including any sites or species protected under the Habitats Regulations.

**Recommendation(s):**

**On the basis of the information presented within the ES and advice from consultees it is recommended that the ES should be approved.**

*Sarah Pritchard*

18 March 2009

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**Sarah Pritchard**

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**Date**